REMARKS

On page 2 of the Action, claims 10 and 12 were rejected under 35 U.S.C. 112, second paragraph. On page 3 of the Action, claims 1-2, 14 and 18 were rejected under 35 U.S.C. 102(b) as being anticipated by Lenz et al.

On page 6 of the Action, claims 5-7, 9-10 and 12-13 were rejected under 35 U.S.C. 103(a) as being unpatentable over Shunichi in view of Lilleland et al. However, in the detailed explanation of the rejection, Lenz et al. and Lilleland et al. were discussed without explanation for Shunichi. Therefore, it is assumed that claims 5-7, 9-10 and 12-13 were rejected by Lenz et al. in view of Lilleland et al.

In view of the rejections, claim 1 has bee amended to include the subject matter of claim 4, and claim 5 has been amended to independent form. Claims 6 and 8-10 have been amended. Claims 4 and 15-18 have been cancelled, and new claims 19-26 have been filed.

In regard to mended claim 1, the feature of claim 4 has been incorporated to the claim 1, which is based on the embodiment shown in Figs. 7 and 8. Namely, the feature "a front surface of said clamping plate exposed to the plasma is on a same plane as the front surface of the front board" is not disclosed in any references.

In the restriction requirement mailed on June 7, 2002, it was held that the invention was directed to species A of Fig. 2, species of Fig. 6, and species C of Fig. 8, to which species C was elected. In the present amendment, claim 1 has been amended to have the structure of Figs. 7 and 8. Therefore, please examine claim 1, now amended.

In Lenz et al., the periphery of the electrode 30 is sandwiched by the ring 34 and the support member 32 as shown in FIG. 2. In FIG. 2 of the Lenz et al., it is understood that a

plasma is generated at the downside of the electrode clamping assembly. Therefore, the down surface of the electrode 30 is supposedly exposed to the plasma. Also, as clearly shown in FIG. 2, the down surface of the electrode 30 is NOT located on the same plane as the down surface of the ring 34. The ring 34 is described as "plasma confinement ring". Therefore, the inner surface of the ring 34 could be exposed to the plasma. Even if so, the inner surface of the ring 34 is NOT on the same plane as the down surface of the electrode 30.

The feature stating that "a front surface of said clamping plate exposed to the plasma is on a same plane as the front surface of the front board" provides the structure that no projection is formed to the plasma at the front board and the clamping plate. As described in paragraph 0064 of the present specification, if a projection is formed at a periphery of the opposite electrode, the plasma may lose uniformity there. The feature stating that "a front surface of said clamping plate exposed to the plasma is on a same plane as the front surface of the front board" prevents this problem.

In Lilleland et al. either, there is no member located on the same plane as the down surface of the electrode 10. The examiner seems to recognize that the ring 18 in Lilleland et al. corresponds to the clamping plate of the present invention. However, this recognition is not correct. Even if it is correct, the ring 18 in Lilleland et al. is not exposed to a plasma, as understood from FIG. 1 of Lilleland et al. Therefore, the feature now amended is not disclosed in Lilleland et al.

No references disclose nor suggest the feature stating that "a front surface of said clamping plate exposed to the plasma is on a same plane as the front surface of the front board". No references disclose nor suggest the advantage obtained by this structure. Therefore, amended claim 1 is not obvious from the references.

In regard to claim 5, claim 5 has been amended to independent form, which is based on the embodiments of Fig. 2 and Fig. 8. Amended claim 1 clarifies that the clamping plate is exposed to the plasma. Thus, amended claim 5 still has the previous feature of "a protector covering a front surface of said clamping plate so that said front surface is not exposed to said plasma".

On page 6 of the Action, the examiner stated that Lenz et al. does not disclose a protector covering a front surface of the clamping plate. The examiner also stated that Lilleland et al. discloses a protector 17 covering a front surface of a clamping plate 18. However, this recognition is not correct. The member 18 in Lilleland et al. can not be "clamping plate".

Lilleland et al. describes the structure shown in FIG. 1 that "it has been conventional to metallurgically bond the upper surface of the outer edge of the silicon electrode 10 to a graphite support ring 12 with indium...", in column 2, lines 33-36.

As understood from this description, the ring 18 is no relation with installation of the electrode 10.

Lilleland et al. also describes that "The plasma confinement ring 17 is bolted to a dielectric annular ring 18 which in turn is bolted to a dielectric housing 18a.", in column 2, lines 47-49.

This description teaches that the ring 18 is provided to support the ring 17.

Lilleland el at. also describes that "A radially inwardly extending flange of clamping ring 16 engages the outer flange of graphite support ring 12. Thus, no clamping pressure is applied directly against the exposed surface of electrode 10.", in column 2, lines 54-58.

Therefore, it is understood that the electrode 10 is not clamped but bonded to the ring 12 and the ring 12 is clamped by the ring 16. In other words, there is no member clamping the electrode 10 in Lilleland et al.

Accordingly, it is not correct that a member corresponding to the clamping plate of the claim 5 is disclosed in Lilleland et al. It is not correct that Lilleland et al. discloses a protector covering a member corresponding to the clamping plate of the claim 5.

Even if the disclosure of Lilleland et al. is applied to the apparatus of Lenz et al., the invention of claim 5 is not obvious.

New claims 19-24 have features that the clamping plate is fixed by screws and the protector covers heads of the screws so that the heads of the screws are not exposed to the plasma.

In Lenz et al., the ring 34 is attached to the support member 32 by bolts 35. However, as clearly shown in FIG. 2 of Lenz et al., there is no member covering the head of the bolt 35.

In Lilleland et al., there is no member to clamp the electrode 10, as explained before. Therefore, there is no screw to fix a member clamping the electrode 10, and no protector covering the head of a screw fixing a member to clamp the electrode 10.

As described in paragraph 0082 of the present specification, the screwing torque is preferably 1.0 Nm or more. For such a high-torque screwing, the screw is preferably made of metal such as stainless steel or aluminum, or ceramics, as described in paragraph 0035 of the present specification. If no protector is provided, the screw exposed to a plasma might release particles contaminating the substrate. If the screw is made of material not contaminating the substrate, e.g. silicon, the protector may be dispensable. However, it is not practical because a screw made of such a material is too weak to fasten the clamping plate. The protector in the invention the advantage of enabling to use screws made of material strong enough as the substrate is prevented from being contaminated by material of the screws.

New claims 23 and 24 have the feature that the protector is L-shaped in cross section and fixed on a side of the opposite

electrode at the upright portion by another screw. The side of the opposite electrode is located further from the space between the opposite electrode and the substrate facing each other. Therefore, the other screw provided there has much less probability to be exposed to the plasma. This brings the merit that a further protector covering the other screw is not required.

As explained above, claims pending in the application are patentable over the cited references.

Reconsideration and allowance are earnestly solicited.

Respectfully Submitted,

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